

REMARKS

Claims 1 and 3-13 are currently pending in this application. Claims 1 and 12 are currently amended. Claims 14-16 are added. Claims 11 and 13 are cancelled. Accordingly, Claims 1, 3-10, 13, and 14-16 will be pending after the entry of this amendment.

Support for the amendment to Claim 1 is found throughout the specification as originally filed, including, for example, paragraphs [0099] of the application as published. Claim 12 is amended to update its dependency; support is implicit therein. Support for new Claim 14 is found throughout the specification as originally filed, including, for example, paragraphs [0094]-[0097] of the application as published. Support for new Claims 15 and 16 is found throughout the specification as originally filed, including, for example, paragraph [0105] of the application as published. No new matter is added.

Amendment of the claims herein is not to be construed as acquiescence to any of the objects/rejections set forth in the Office Action and was done solely to expedite prosecution. Applicants reserve the right to pursue the subject matter of the claims as originally filed or similar claims in this or one or more patent applications.

The Office Action rejects Claims 1 and 3-13 under 35 U.S.C. § 103(a) over U.S. Patent No. 6,027,873 to Schellenberger (hereinafter "Schellenberger") in view of U.S. Patent No. 5,770,860 to Franzen (hereinafter "Franzen") or U.S. Patent No. 6,024,925 to Little et al. (hereinafter "Little"), and U.S. Patent No. 4,682,890 to de Marcario (hereinafter "de Marcario"). Applicants respectfully traverse this rejection.

Schellenberger is directed, in part, to a testing apparatus including a testing plate with a pair of opposing surfaces and a plurality of through holes. Schellenberger discusses loading the plates by immersion in a solution. Id., col. 6, lines 10-30.

Franzen is directed to systems and methods of adapting a "sample support in its size and shape to microtiter plates." Franzen, col. 2, lines 58-60. Franzen uses an array of micropipettes with the same spot spacing as the reaction wells of a microtiter plate. Id., col. 2, lines 66-67. The spot spacing of the micropipettes remains the same and instead relies on interlacing to populate the sample support. Id., col. 3, lines 9-18.

Little is directed to a device for preparing arrays of sample material for analysis by a diagnostic tool. Little, col. 5, line 66 to col. 6, line 13.

de Macario is directed to a "microsample holder" for spectrophotometers having circular holes "on the order of about 3 mm in diameter" for retaining a liquid sample. de Macario, col. 2, lines 60-65.

To properly determine a *prima facie* case of obviousness, the Examiner "must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made." M.P.E.P § 2142. This is important as "impermissible hindsight must be avoided and the legal conclusion must be gleaned from the prior art." *Id.* Four factual inquiries must be made: first, a determination of the scope and contents of the prior art; second, a determination of the differences between the prior art and the claims in issue; third, a determination of level of ordinary skill in the pertinent art; and fourth, an evaluation of evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Three criteria may be helpful in determining whether claimed subject matter is obvious under 103(a): first, if there is some suggestion or motivation to modify or combine the cited references; second, if there is a reasonable expectation of success; and third, if the prior art references teach or suggest all the claim limitations. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). With regard to the first criterion, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.3d 690 (Fed. Cir. 1990). "Knowledge in the prior art of every element of a patent claim ... is not of itself sufficient to render claim obvious." *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1333-34 (Fed. Cir. 2002). The issue is whether there is an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *KSR*.

The cited references, even in combination, fail to teach or suggest a method of loading a plurality of liquid samples into a plurality of through-holes from a microtiter plate including the step of stacking a plurality of through-hole arrays in registration, let alone the formation of a fluidic bridge during loading. Additionally, there is no

suggestion or motivation to combine the references as proposed; nor is there any reasonable expectation of success.

As discussed above, Schellenberger discusses "dip loading" of a through-hole plate. Schellenberger is silent on a method involving a plurality of through-hole arrays, let alone a method including stacking a plurality of through-hole arrays in registration.

Likewise, Franzen does not teach or suggest a method including stacking a plurality of through-hole arrays in registration. Rather, the concept of stacking a plurality of through-hole arrays in registration is incongruous with the teachings of Franzen. Franzen provides no suggestion that the sample support contains holes of any variety or that a plurality of sample supports may be loaded by stacking. Indeed, a sample support with holes would be problematic at best given that the MALDI process for which Franzen is directed involves bombarding the sample support with short flashes from a pulsed laser. Id., col. 1, lines 24-31.

Little also fails to teach or suggest a method involving a plurality of through-hole arrays, let alone a method including stacking of through-hole arrays. Rather, as clearly depicted in FIG. 7 of Little, the target receptacle is a substrate with etched walls, and not a through-hole.

Finally, de Macario does not teach or suggest a method involving a plurality of through-hole arrays, let alone a method including stacking a plurality of through-hole arrays in registration.

The Office Action asserts that de Macario teaches "a plurality of arrays that are placed adjacent to each other by a small non-zero distance that allows a liquid bridge to form allowing fluid to be transferred to retaining elements that are adjacent to each other." Applicants respectfully assert that the Office Action misapplies de Macario in combination with the other cited references.

First, de Macario does not teach or suggest the use of fluidic bridging as a means of loading a through-hole. Rather, the fluidic bridge taught in de Macario is the end result, not the means for achieving an end (*i.e.* the loading of a plurality of registered through-holes, as claimed by Applicants).

Second, de Macario does not teach or suggest the formation of the fluidic bridge through fluid pressure or the breaking of the fluidic bridge when the pressure is

withdrawn as claimed by Applicants. In contrast, the fluidic bridge in de Macario apparently exists until one of the supports is withdrawn from the support holder.

Accordingly, Applicants request reconsideration and withdrawal of the rejection of Claims 1, 3-10, and 13 under 35 U.S.C. § 103(a).

In view of the foregoing, Applicants request reconsideration of all the rejections and allowance of the application with Claims 1, 3-10, 13, and 14-16 presented herein. If a telephone conversation with Applicants' representatives would be helpful to expedite prosecution of the application, Applicants urge the Examiner to telephone the undersigned at the number indicated below.

Applicants believe that no fees or extensions are required for consideration of this Amendment and Response. However, if for any reason the authorized fee is inadequate, the Office is conditionally authorized and requested to charge Deposit Account No. **04-1105** under order number 65689CPDV(43382). Also, the Office should consider this a conditional petition for the proper extension period needed to have this response entered and considered, if any.

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Respectfully submitted,

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